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## CENTRAL INTELLIGENCE AGENCY

20 September 1949

INTELLIGENCE MEMORANDUM NO. 227

SUBJECT: ESTIMATE OF STATUS OF CHEMICAL WARFARE IN THE USSR  
(Category No. 7)Category as a whole:

The USSR is capable of launching and sustaining for an extended time operations in CW. Production of conventional agents is in part in process, in part in stand-by at the present time. Adequate stocks of conventional chemical agents are on hand to carry through the initial period of delay in converting plants from stand-by to in-process condition. Equipment for dissemination including airborne spray tanks is adequate. Field units are well stocked with protective equipment. At this time insufficient amounts of any of the G agents are believed to be available for more than very limited field operations. ~~(Top Secret)~~

## ESTIMATE BY TECHNICAL OBJECTIVES

CW-1. Research and development on new and improved chemical warfare agents.

(a) The USSR possesses adequate process information and technical manpower to produce GA and probably GB. There is as yet no firm indication that such production is underway or where it may take place. Limited stocks of GA were captured by the Soviets in 1945 but these would not be adequate for more than extensive field testing and limited field operations. It is believed likely however that the stocks have to a small extent been augmented by production in the USSR. ~~(Secret)~~

Document No.

No Change in Class. ☐☒ Declassified

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Next Review Date:

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(b) The USSR has given extensive field tests to phosgene oxime, a sternutator of some value, which has been prepared and given a low evaluation in the U.S. ~~(Confidential)~~

(c) No other new agents are known to exist. Because of the preeminence of a group of Soviet chemists in the chemistry of organic compounds of phosphorus, it is believed to be highly probable that new compounds of the G type will be discovered if in fact they are not now known to the Soviets. ~~(Secret)~~

GV-2. Research and development on new and improved methods and equipment for the production, storage, and handling of offensive and defensive chemical warfare agents.

(a) Storage and handling problems with regard to phosgene oxime have been overcome by the USSR but details are not known. ~~(Confidential)~~

(b) No process, storage, or handling information for the G agents is available. ~~(Confidential)~~

GV-3. Research and development on new and improved methods and equipment for the dissemination of chemical warfare agents including modifications of standard bombs, ammunition, and warheads to make them suitable for this purpose, and meteorological studies pertaining thereto.

(a) It is believed that the Soviets have a suitable device for spraying of persistent agents by aircraft. No significant details are available. ~~(Confidential)~~

(b) No other significant information is now at hand on other phases of this objective.

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CW-4. Research and development on new and improved chemical warfare agent detection, neutralization, protection, and decontamination equipment and techniques.

(a) Examination of Soviet detection kits, decontaminating equipment, and protective devices has shown nothing which might be considered as being "new or improved." ~~(Confidential)~~

(b) Information from other sources is not available.

CW-5 Research and development on new and improved techniques and equipment for solution of medical problems encountered in chemical warfare.

(a) There is little doubt that the Soviets are devoting considerable effort to this type of research. Publications however have shown only limited detail on experiments with mustard, the nitrogen mustards, and diisopropyl fluorophosphonate. Information is as yet too sketchy to indicate techniques or equipment which may eventually be evolved. ~~(Restricted)~~

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